## UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF OHIO EASTERN DIVISION

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION

THIS DOCUMENT RELATES TO:

Track Three Cases

MDL No. 2804

Case No. 1:17-md-2804

Judge Dan Aaron Polster

## REPLY IN SUPPORT OF DEFENDANTS' MOTION TO EXCLUDE CERTAIN OPINIONS AND TESTIMONY OF DR. KATHERINE KEYES

**REPLY EXHIBIT 2** 

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2	SUPREME COURT OF THE STATE OF NEW YORK COUNTY OF SUFFOLK: PART 48
3	x
4	IN RE: OPIOID LITIGATION
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6	<u>INDEX NO.:400000/2017</u>
7	x
8	September 10, 2020 Central Islip, New York
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10	MINUTES OF FRYE HEARING
11	(Testimony of Dr. Keyes)
12	B E F O R E: HON. JERRY GARGUILO Supreme Court Justice
13	APPEARANCES:
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55 1 Frye Hearing - Dr. Keyes 2 In your work on this case, did you also 3 review rates of prescribing of prescription opioids? 4 Α Yes. 5 And did you do that in -- in reviewing studies that analyzed that sort of data? 6 7 Α Yes. 8 Now, in this last section of this 9 examination, I'd like to discuss how you applied 10 your methodology in reaching your opinions. 11 THE COURT: Doctor, is this your 12 methodology or the Bradford Hill methodology 13 that you applied? 14 THE WITNESS: I would say it fits into 15 both. You know, the Bradford Hill 16 methodology is sort of a larger set of 17 criteria to use when looking at a body of 18 literature, but, you know, the reliability of 19 the underlying data is one of those factors. 20 And so --21 THE COURT: Did I hear correctly, you 22 indicated that you applied six of the 23 criteria of the Bradford Hill methodology? 24 THE WITNESS: Yes. 25 THE COURT: Is there nine?

56 1 Frye Hearing - Dr. Keyes 2 THE WITNESS: There are nine. 3 BY MR. REISMAN: 4 Q. Would it be fair to say that you applied 5 all of the factors, but the six that we've just 6 discussed are the most important factors for 7 purposes of explaining your methodology today? 8 MR. SCHMIDT: I'll object to his feeding 9 testimony to the witness, leading. 10 THE COURT: Just do me a favor. Take the mask off for a second. What's the 11 12 objection? 13 MR. SCHMIDT: Sorry. I will object to 14 that one as leading because he's feeding 15 testimony to the witness. 16 THE COURT: Rephrase the question. I'm 17 not going to consider the answer. Rephrase 18 the question, and then I'll consider the 19 answer. 20 BY MR. REISMAN: 21 Q. Dr. Keyes, in your methodology in this 22 case, did you apply all of the Bradford Hill 23 factors? 24 Generally, if I can give an example, I 25 think it would be helpful.

57 1 Frye Hearing - Dr. Keyes 2 THE COURT: Go ahead. Give me an 3 example. 4 THE WITNESS: So another Bradford Hill 5 criteria, for example, is analogy. An analogy is, you know, not necessarily the, 6 7 you know, whether the evidence is consistent 8 with other associations in the literature 9 that aren't germane to the one that you're 10 considering. And I used analogy in my 11 report. 12 I just didn't consider it to be among 13 the most, you know, kind of important and 14 compelling factors that drove my opinions, 15 but certainly there are in my report 16 analogies in other, in other literatures, and that would be a Bradford Hill criteria. So 17 18 that's an example. 19 THE COURT: Next question. 20 BY MR. REISMAN: 21 Q. Did you use the name Bradford Hill? 22 Does it appear in your report anywhere? 23 Α No. But you did use the principles, the 24 25 factors that Bradford Hill described in your report;

58 1 Frye Hearing - Dr. Keyes 2 is that right? 3 Α That's right. 4 Now, we're going to move on in this last Q. 5 section to talking about your opinions and how you 6 got from your methodology to your opinions. Does 7 this slide summarize your opinions at a high level 8 in this case, the opinions relating to causation? 9 Α Yes. 10 THE COURT: Do you have a copy of that 11 slide on paper? 12 MR. REISMAN: We can make one. 13 THE COURT: I'll move it. We can see it 14 this way. Thank you. 15 BY MR. REISMAN: 16 So the first one, Dr. Keyes, is use of Q. 17 prescription opioids increases the risk of opioid 18 use disorder and abuse of illicit opioids such as heroin and fentanyl; is that right? 19 20 Α Yes. 21 Q. The second is the increased supply of 22 prescription opioids since the 1990s led to an 23 increase in rates of opioid use disorder, opioid 24 overdose deaths, and other harms. Did I read that 25 correctly?

1 114 Frye Hearing - Dr. Keyes 2 a term, Bradford Hill, that you never once mention 3 in your report; is that correct? That's correct. 4 Α 5 You don't lay out in your report, 6 according to the nine factors of Bradford Hill and 7 how you believe your opinions track against those 8 nine factors, correct? 9 Correct. A 10 And you certainly don't do that if you 11 recall Slide 14 of your presentation, that's where 12 you have the three individual opinions. You 13 certainly don't do that for those three individual 14 opinions. Say, for this opinion, here's how factor 15 one is met, here's how factor 2 is met, here's how 16 coherence is met. Here's how analysis of alternate 17 causes is met, correct? You don't do that? 18 Α That's right. 19 Ο. There's no mention at all in your 20 report, for example, of something like biological 21 plausibility, correct? 22 Those words may not be in the report. 23 Q. Now, you do set forth your methodology 24 in your report, correct? 25 Α Yes.

115 1 Frye Hearing - Dr. Keyes 2 Do you have it handy? Q. 3 Α Yes. 4 If you look at page 11 of your report, I 5 believe there is a two- or three-page discussion of your methodology for the review of the evidence, 6 7 correct? 8 Α Yes. 9 And there's no mention of Bradford Hill Q. 10 in there, correct? 11 Α Not that name. There's no walk through of Bradford Hill 12 Q. 13 factors one by one in there, is there? Yes or no. 14 Not of the Hill factors. 15 Okay. And you talked about published 16 articles you have on prescription opioids. You've 17 never published an article on prescription opioids 18 that contains one of the three opinions that you stated on Slide 14 that you were shown with 19 20 Plaintiffs' counsel. You've never published an article setting forth one of those three opinions 21 22 and specifically invoking Bradford Hill to analyze 23 those opinions, correct? 24 I mean, those are two questions, right? The first is --25

116 1 Frye Hearing - Dr. Keyes 2 It's a two-part question. Have you 3 published the opinions that you've given us in court 4 in an article that specifically discusses the Bradford Hill factors or even references the 5 6 Bradford Hill criteria? Yes or no. 7 The word Bradford Hill specifically? 8 Q. Yes. 9 Not the word Bradford Hill specifically. Α 10 Or that walks through each factor one at Ο. a time? 11 The discussion sections of the paper is 12 13 generally in epidemiology cohered to the types of 14 factors that Bradford Hill outlined in. 15 Can you points me to a paper you 16 published where you give one of the opinions on 17 causation in this case and specifically walk through 18 the various Bradford Hill factors to support that 19 opinion? Yes or no. 20 No, not at the time. 21 Q. Now, I'd like to turn now to the 22 substance and how that tracks your methodology, and 23 I want to start first with your opinion on supply. I want to talk about the why of supply. 24 25 Are you aware that the DEA, the Drug